

PROCEEDINGS
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FIFTEEN NEW THYSANOPTERA FROM THE
UNITED STATES

By J. DOUGLAS HOOD

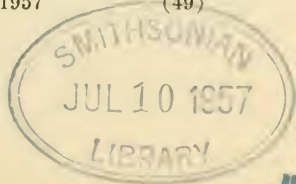
The great majority of the species described in this paper were taken during the summer of 1955, in the region of the Southwestern Research Station of the American Museum of Natural History, near Portal, Arizona, in the Chiricahua Mountains. Even in a preliminary paper as brief as this, space must be taken to mention and thank Dr. Mont A. Cazier and Dr. Willis J. Gertsch, of the American Museum staff, and Mr. John Gordon Anderson, Foreman at the station, who were primarily responsible for the success of the undertaking; and I must acknowledge, too, the hospitality of the William C. Miller family of ranchers in the Peloncillo Mountains, close by in New Mexico, whose home became a sort of subsidiary headquarters in the work of collecting. The types of the new species are in my collection.

*Scirtothrips*¹ *clivicola*, sp. nov.

Very similar to *brevipennis* and *taxodii* in that the abdominal terga and sterna are without dark cross-lines and the wings very short; differing from both in the paler and less orange-colored body and in having three instead of (normally) four setae along the front margin of anal lobe of fore wings; differing from the former in the narrower head and from the latter most conspicuously in the less protruding eyes, which are proportionately closer to the base of head.

♀ (macropterous).—Length about 0.8 mm. (distended, 0.9 mm.). Color pale yellow, rather than orange-yellow, prothorax not shaded; antennae with segment I nearly colorless, II without orange pigment, it and III-VIII pale yellowish gray, III-V shaded apically, IV and V with pedicels dark; ocellar pigmentation orange-red; legs concolorous with body, very lightly shaded with gray; fore wings nearly colorless, except for the orange-pigmented veins. Head 86 μ long, 120 across eyes, 114 across cheeks, 102 across base; eyes not noticeably protruding, dorsally 51 long, 34 wide, interval 53, distance from base of head 22; pronotum 80 long, 140 wide, sculpture normal, setae pale gray, seta at

¹*Scirtothrips longipennis* (Bagnall) was mistakenly placed by Morison (Lond. Nat., 1947, No. 27, Suppl., p. 49) in the genus *Sericothrips*. Hood's placement in 1914 of this species in *Scirtothrips* (Proc. Ent. Soc. Wash., 16(1):37,40) has been accepted by all later workers. The species is hereby returned to *Scirtothrips*.



posterior angles 31; mesothorax 145 across anterior angles, greatest width 167; fore wings 497, chaetotaxy normal; abdomen 206 wide at segment IV, setae on IX and X darker than integument, 40-45. Antennal segments: I 16 (21), II 34 (24), III 39 (17), IV 34 (17), V 36 (17), VI 37 (15), VII 7 (8), VIII 10 (5).

ARIZONA: Chiricahua Mts., August 31, 1955, J.D.H., 3 ♀♀ (including holotype), swept from low grasses and herbs.

*Sericothrips*² *pubescens*, sp. nov.

Very similar to *cingulatus* in having the first eight abdominal terga clothed with fine microtrichia (even medially) and in the nearly yellow fourth and fifth segments; but with the metanotum completely covered with minute microtrichia, pronotum subreticulate (rather than transversely striate) in front of blotch, pronotal setae pale and shorter (those at posterior angles respectively 15 and 23 μ long, instead of about 20 and 41), wing-pads shorter (92 μ , rather than about 130) and with fewer and shorter setae, median pair of setae on abdominal tergum I about as far apart as the homologous pair on II (instead of much closer together than that pair) and situated external to the inner of two pairs of pores (instead of internal to a single pair), and with the legs wholly yellow save for a slight shading on the hind femora (instead of all femora largely dark brown).

♀ (brachypterous).—Length about 1.1 mm. (distended, 1.2 mm.). Color dark brown, with abdominal segments IV and V nearly white, VI and VIII-X pale brown, VI pale basally; metathorax yellowish in posterior half; pronotal blotch scarcely darkened except marginally; antennal segments I-III yellow, III shaded lightly in about apical half, IV-VIII dark gray brown, IV and V briefly paler just beyond pedicel; legs yellow, hind femora lightly shaded with brown on outer surface near tip; wing-pads colorless. Head 113 μ long, 174 across eyes, 156 across cheeks, the latter slightly concave, surface of head striate as usual; mouth-cone short and rounded, extending about 105 μ beyond posterior dorsal margin of head; eyes 72 μ long, 51 wide, 72 apart; pronotum 133 long, 238 wide, front margin of blotch indicated by a brown, broadly V-shaped line whose point is only very slightly in advance of middle of pronotum, sculpture in front of blotch subreticulate, with the lines 6-7 μ apart, those within the blotch area much closer together; mesothorax 225 across anterior angles, greatest width 238; fore wings 92, their longest setae 23; abdomen 332 wide at segment IV, IX with setae I-III 50-57, X with seta I 54, II 60. Antennal segments: I 30 (32), II 44 (29), III 73 (19), IV 59-63 (19), V 48 (19), VI 57 (16), VII 13 (7), VIII 18 (5).

NEW YORK: Apulia Station, October 11, 1940, Dr. F. Reese Nevins and J.D.H., 1 ♀ (holotype), from grass.

²It might be well to point out, in connection with Hartwig's key to the known species of this genus (Ent. Mem., Dept. Agr., Pretoria, 2(11):402, 1952) that the genus *Sericothrips* Haliday was described in 1836, rather than in 1835; that the species which he calls *Sericothrips apteris* Daniel was referred to *Anaphothrips* in 1926 by Moulton (Pan-Pac. Ent., 3(1):23) and assigned as a synonym of *A. seticornis* (Trybom) in 1927 by Hood (Pan-Pac. Ent., 3(4):173); and that the species which Hartwig calls *Sericothrips reticulatus* Moulton was placed in a new subgenus of *Anaphothrips*—now recognized as a distinct genus—in 1926 by Moulton (Pan-Pac. Ent., 3(1):22), who referred to it as *Anaphothrips (Prosoponaphothrips) reticulatus*.

Sericothrips ephedrae, sp. nov.

Allied to *moultoni* and *chrysothamni*, but differing from both in having abdominal segments VII-X largely yellow, IX and X wholly so.

♀ (macropterous).—Length about 1.1 mm. (distended, 1.2 mm.). Head brown in ocellar area, in front, and along occipital apodeme, remainder yellow; pronotum with front margin of blotch brown and unbroken, and with three or four coalescing foveal dark spots; pterothorax with bright orange internal pigmentation, marked with gray-brown; abdomen bright yellow in segments IX and X, yellowish elsewhere, with prominent, complete, blackish brown antecostal lines on terga II-VII, that on VIII confined to median third or more, shaded with gray behind these lines, more broadly and darkly so near sides of body; antennae with segment I nearly colorless, II dark yellowish brown, III-V pale brownish gray, III with narrow dark ring at tip of pedicel, its narrowed basal portion beyond, as well as apex, dark gray, IV and V with pedicels and apical two-fifths dark, VI-VIII concolorous with tip of V; legs yellow, but with all femora and tibiae heavily shaded with brown in middle third or more; fore wings pale, slightly darkened in scale and adjoining part of membrane, with a dark band occupying apical half of second fifth.

Head 113 μ long, 162 across eyes, 153 across cheeks, striate in occipital area; mouth-cone short, extending about 73 μ beyond posterior dorsal margin of head; eyes about 71 long, 47 wide, and 77 apart; pronotum 116 long, 181 wide, striae in front of blotch about twice as far apart as those within it, outer seta at posterior angles 10, inner 42 and light brown, all others colorless; mesothorax 185 across anterior angles, greatest width 225; fore wings 714, midcostal setae 39, one accessory seta near tip behind vein, the latter with 3 + 15-18; abdomen 258 wide at segment IV, terga II-V not pubescent medially, comb on VI interrupted at middle, IX with seta I 56, II 47, III 50, X with I and II 63. Antennal segments: I 22 (27), II 40 (27), III 50 (20), IV 49 (18), V 40 (16-17), VI 45 (16), VII 9 (6-7), VIII 13-14 (5).

♂ (macropterous).—Length about 0.8 mm. (distended, 0.9 mm.). Color and general structure much as in female.

NEW MEXICO: Rodeo, August 8, 1955, J.D.H., 12 ♀♀ (including holotype).—ARIZONA: about 8 mi. S.W. of Rodeo, N.M., August 9, 1955, J.D.H., 10 ♀♀ and 1 ♂ (allotype). All specimens were taken from *Ephedra trifurca*.

Sericothrips catenatus, sp. nov.

Resembling *desertorum* in having abdominal terga II-V not pilose medially in the vicinity of the antecostal lines, the fore wings with one accessory seta near tip behind the vein, and the distinctly striate meso- and metanota; but differing in the pale yellow color of the body and legs, shaded pronotal foveae, paired gray spots at lateral fourths of terga II-VII, colorless antecostal lines between these spots, color of the fore wings, slenderer antennae, and the very long mouth-cone; resembling *albus* in this last character, but that species apparently lacks shading in the pronotal foveae and abdominal markings.

♀ (macropterous).—Length about 0.9 mm. (distended, 1.04 mm.). Color pale yellow (distinctly whitish) in body and legs; pronotum

without blotch but with four pairs of foveal gray spots, mesonotum with a pair of well-separated similar spots, metanotum with a pair of larger touching spots, abdomen spotted as noted above; antennae concolorous with head in segments I and II, the latter segment very slightly darker, III-V similarly pale, III with narrow dark ring at tip of pedicel, the narrowed basal portion of the part beyond pedicel, as well as apex, gray, IV and V with pedicels darkened, IV shading in apical two-fifths to dark gray at tip, V abruptly gray in apical two-fifths and darker at tip, VI-VIII dark gray; fore wings lightly shaded in scale and adjoining area of membrane of wing, and with a more distinct gray spot occupying about basal half of second fourth.

Head 73 μ long, 127 across eyes, 117 across cheeks, striate in occipital area; mouth-cone very long, extending 146 μ beyond posterior dorsal margin of head, well onto mesosternum; maxillary palpi long, their three segments 26, 13, and 26-27 μ long, respectively; eyes about 56 μ long, 36 wide, and 56 apart; pronotum 96 long, 139 wide, striae in front of blotch area transverse, about twice as far apart as those at middle of pronotum, outer seta at posterior angles 11, inner 45 and light brown, all others colorless; mesothorax 152 across anterior angles, greatest width 186; fore wings 609, midcostal setae 38, one accessory seta near tip behind vein, the latter with 3 + 18; abdomen 237 wide at segment IV, comb on VI broadly interrupted at middle, IX with seta I 47, II 40, III 43, X with I and II 50. Antennal segments: I 20 (23), II 34 (23), III 50 (17), IV 45 (16), V 40 (15), VI 49 (13), VII 10 (6), VIII 13-14 (4).

ARIZONA: Chiricahua Mts., July 22, 1955, J.D.H., 13 ♀♀ (including holotype) and 1 ♂ (allotype); Pajarita Mts. (near Nogales), August 31, 1927, J.D.H., 8 ♀♀. All specimens were taken from desert shrubs.

Sericothrips desertorum, sp. nov.

Resembling *setosus* in having the antecostal lines on abdominal terga II-VII dark and complete, the more basal terga not pilose medially in the vicinity of these lines, the fore wings with one accessory seta near tip behind the vein, and the mouth-cone short; but differing in the orange-pigmented pterothorax, the distinctly striate meso- and metanota, and the shorter setae on pronotum and fore wings.

♀ (macropterous).—Length about 1.0 mm. (distended, 1.1 mm.). Yellow, excepting the heavily orange-pigmented pterothorax, pronotum without darkened blotch; abdomen with brown antecostal lines on terga II-VII; antennae concolorous with head in segments I and II, III-V grayish yellow, III with narrow dark ring at tip of pedicel, the narrowed basal portion of the part beyond pedicel, as well as apex, gray, IV and V with pedicels darkened, IV shading in apical two-fifths to dark gray at tip, V abruptly dark gray in apical two-fifths and darker at tip, VI-VIII dark gray; legs yellow; fore wings nearly uniform pale yellowish.

Head 94 μ long, 147 across eyes, 138 across cheeks, striate in occipital area; mouth-cone short, extending about to middle of prosternum; eyes about 61 μ long, approximately 40 wide, and 66 apart; pronotum 102 long, 172 wide, striae in front of blotch area close and transverse, though farther apart than those at middle of pronotum, outer seta at posterior angles about 14, inner 38 and light brown, all others colorless; meso-

thorax 172 across anterior angles, greatest width 217; fore wings 650, midcostal setae 33, one accessory seta near tip behind vein, the latter with $3 + 19$; abdomen 263 wide at segment IV, terga II-V not pubescent medially in the vicinity of antecostal line, comb on VI broadly interrupted at middle, IX with seta I 50, II 46, III 44, X with I and II 53-55. Antennal segments: I 20 (24), II 40 (26), III 49 (19), IV 41 (18), V 36 (17), VI 40 (16), VII 10 (6-7), VIII 13 (5).

NEW MEXICO: Peloncillo Mts., June 30, 1955, J.D.H., 1 ♀ from a desert shrub.

Sericothrips baileyi, sp. nov.

Resembling *trifasciatus*³ in having the pale distal half of fore wings with a darker band occupying approximately its middle third, tergum VI of abdomen without comb medially, and the occipital apodeme much closer to eyes than to base of head; but with antennal segments I and II scarcely darker than III, abdominal terga II-III and VII-VIII not darkened, and fore wings with only one accessory seta near tip, behind the vein.

♀ (macropterous).—Length about 1.2 mm. (distended, 1.4 mm.). Head brown in ocellar area, along occipital apodeme, remainder yellow with slight shading; pronotum with front margin of blotch brown and unbroken, and with three or four coalescing foveal dark spots, remainder yellow; pterothorax yellow, with brown spots; abdomen yellow, with prominent dark antecostal lines on terga II-VII, shaded behind these lines, more broadly so in lateral thirds and in median third of VII, VIII clouded in basal half, pleurae dark; antennae with segment I nearly colorless, II pale brown but nearly colorless in pedicel and subapically, III and IV pale brownish gray, III with narrow dark ring at tip of pedicel, its narrowed basal portion beyond, as well as apex, dark gray, IV and V with pedicel and apical half darkened, V darker throughout than IV, VI-VIII dark gray; legs yellow, shaded with brown or gray, fore coxae darker than the others, fore femora clouded at middle of outer surface, hind femora darkened in apical third except for extreme tip, middle femora and all tibiae darkened in middle half or third, tarsi yellow; fore wings clouded in scale, gray in second fourth, this band followed by a somewhat paler band midway between it and tip of wing.

Head 115 μ long, 156 across eyes, 150 across cheeks, striate in occipital area; mouth-cone short, extending about to middle of prosternum; eyes about 67 μ long, 43 wide, and 67 apart; pronotum 125 long, 195 wide, striae in front of blotch about twice as far apart as those within it, outer seta at posterior angles about 10, inner 46 and light brown, all others colorless; mesothorax 185 across anterior angles, greatest width 245; fore wings 742, midcostal setae 45, one accessory seta near tip behind vein, the latter with $3 + 16-19$; abdomen 318 wide at segment IV, terga II-V pubescent medially in the vicinity of antecostal line, comb on VI interrupted at middle, IX with seta I 57, II 52, III 51, X with I 64, II 58. Antennal segments: I 21 (26), II 40 (28), III 57 (21), IV 51 (19), V 46 (16), VI 50 (16), VII 10 (7), VIII 13 (5).

³*Sericothrips trifasciatus* (Ashmead), comb. nov. (*Thrips trifasciatus* Ashmead, Ins. Life, 7(1):27, 1894.) Watson suggested (Bull. 168, Fla. Agr. Exp. Sta., p. 44, 1923) that this might be *Franklinothrips vespiformis*, but scarcely a word or phrase of Ashmead's description could be applied to that species.

♂ (macropterous).—Length about 0.9 mm. (distended, 1.04 mm.). Color and general structure much as in female.

CALIFORNIA: Westley, September 6, 1935, Dr. S. F. Bailey, 5 ♀♀ (including holotype) and 1 ♂ (allotype), from leaves of milkweed.

Plesiothrips pallidipennis, sp. nov.

Closely allied to *perplexus*⁴, but with abdomen never largely yellow; legs darker, with femora brown; wings pale, with slight cloud at basal third; segment IV of antennae with distinct ring-joint at base in ♀, IV much shorter than V in ♂.

♀ (macropterous).—Length about 1.3 mm. (distended, 1.6mm.). Color blackish brown, with bright red internal pigmentation in thorax; head and tip of abdomen darkest, intermediate abdominal segments paler; antennae with segments I, II, and V-VII about concolorous with head, III and IV grayish yellow, III shaded apically, IV darker and sometimes nearly concolorous with V; femora brown, yellowish basally, tibiae and tarsi yellow, or the former shaded with brown, especially basally; fore wings nearly colorless, somewhat yellowish, sometimes with a slight brownish cloud at basal third. Head 141 μ long, 126 across eyes, 114 just behind eyes, 122 across cheeks, and 104 across base, thoroughly typical in sculpture and chaetotaxy; eyes 61 long, 34 wide, and 58 apart; pronotum 135 long, 152 wide, smooth except for faint striae near front and hind margins, setae at posterior angles pale brown, each 50 μ ; mesothorax 174 across anterior angles, greatest width 190; fore wings slender, nearly straight, about 19 times as long as wide; abdomen 237 at segment IV, setae on IX respectively 96, 136, and 133, on X 128. Antennal segments: I 26 (32), II 32 (24), III 42 (21), IV 52 (19), V 36 (16), VI 54 (17), VII 27 (7).

♂ (macropterous).—Length about 0.9 mm. (distended, 1.1 mm.). Typical in structure and like female in color and structure, except for the dimorphic antennae; antennal segments IV and V with ring-joints; I 23 (31), II 30 (24), III 35 (22), IV 50 (21), V 82 (18), VI 91 (19), VII 15 (4).

ARIZONA: Chiricahua Mts., July 12-August 14, 1955, J.D.H., 5 ♀♀ (including holotype taken August 4) and 36 ♂♂ (including allotype taken August 4), from grasses.

NEW MEXICO: Peloncillo Mts., August 5, 1955, J.D.H., 1 ♂, from *Lepidium Thurberi*.

Eurythrips genarum, sp. nov.

Closely related to *ampliventralis* and *conjunctus*, but with two sense-cones on outer surface of segment III of antennae, posterior facet of eyes largely or wholly behind notch in cheeks at eyes, wing-pads of brachypterous form small and with only one seta, and glandular area on sternum VIII of ♂ occupying less than one-third the length of segment, traversing it just behind middle, ends curved backwards.

♀ (brachypterous).—Length about 1.4 mm. (fully distended, 1.72 mm.). Color of head bright yellow, slightly shaded with brown along cheeks and in ocellar area; thorax yellowish brown, pterothorax darker,

⁴*Plesiothrips perplexus* (Beach); synonym: *Thrips panicus* Moulton, Fla. Ent., 13:61, 1929. New synonymy.

abdomen shading to blackish brown apically, tube paler at base and apically; legs yellow; antennae yellow in segments I and II and base of III, remainder brown, darker apically. Head 180 μ long, 118 across eyes, 118 across cheeks just behind notch, 140 across cheeks, 131 in front of basal collar, across head-process 74, dorsal surface faintly reticulate just in front of occipital line; postocular setae 54, interval 84, dilated at tip. Eyes 43, width 36, interval 47. Antennal segments: I 40 (36), II 51 (31), III 56 (30), IV 50 (29), V 50 (28), VI 50 (27), VII 37 (22), VIII 26 (13); sense-cones on IV 1 (2); pedicel of VII short, not at all comparable with that of VI, broadened at base, not quite twice as wide as latter. Prothorax normal, major setae dilated like postoculars, antero-angulars and midlaterals 44 46, epimerals 55, postero-marginals 51, coxals 33; fore wings 37, wing setae 37; fore tarsal tooth minute. Abdomen normal to group, most setae dilated, setae I and II on segment IX 95-100 μ , tapering rapidly at tip to a sharp point; tube 115, across base 67, at tip 33, terminal setae 90.

♂ (brachypterous).—Length about 1.1 mm. (fully distended, 1.3 mm.). Color and structure almost identical with that of ♀.

VIRGINIA: Fairfax Co., January 5, 1941, Lincoln C. Pettit, 6 ♀♀ (including holotype) and 1 ♂ (allotype); Falls Church, March 4, 1941, L. C. P., 2 ♀♀. Both lots were from *Andropogon*.

*Karnyothrips*⁵ *medialis*, sp. nov.

♀ (brachypterous).—Bicolorous, chestnut-brown and yellow; legs (including all coxae), pterothorax, and first abdominal segment, bright yellow; second abdominal segment yellow laterally, remainder of body brown, with head darker than prothorax, abdomen somewhat darker apically; antennae with segment I darkest and concolorous with head, II yellow but shaded along sides and in pedicel, III and IV yellow but tinged with brown, V-VIII successively slightly darker. Length about 1.4 mm. (distended, 1.7 mm.). Head, total length 0.177, width across eyes 0.120, just behind eyes 0.116, across cheeks 0.123, near base 0.114; eyes, dorsal length 0.050, width 0.029, interval 0.059; postocular setae slightly dilated apically, 26 μ long, 105 apart, and about 18 from eyes; prothorax smooth, 117 μ long, 197 across coxae, epimera not fused with notum, antero-marginal and midlateral setae minute and pointed, the others slightly dilated, antero-angulars 20, epimerals 48, postero-marginals 34, coxals 20; mesothorax 192 across anterior angles, abdomen 231 at segment V; tube, length 80, subbasal width 54, apical width 26, terminal setae 160; seta I on abdominal segment IX 45, dilated at tip, II 89, pointed, III 85. Antennal segments: I 27 (32), II 40 (25), III 34 (21), IV 33 (23), V 38 (23), VI 39 (22), VII 34 (18), VIII 30 (10); III without sense cones, IV with one on either surface.

ARIZONA: Chiricahua Mts., September 5, 1955, J.D.H., 5 ♀♀ (including holotype), from dead vegetation.

Karnyothrips *piceus*, sp. nov.

Much like *prolatus* in color and in that the major setae on the ninth abdominal segment are pointed; but with head little more than 1.3

⁵*Karnyothrips americanus* (Hood) 1908; synonym: *Cephalothrips elegans* Moulton, Bull. Brooklyn Ent. Soc., 24:236, 1929. New synonymy.

times as long as wide, antennal segment VIII narrowed at base and nearly three times as long as wide, and male with glandular area on eighth abdominal sternum in the form of a transverse band traversing the segment just behind middle.

♀ (apterous).—Body, legs, and antennae nearly uniform blackish brown, with tarsi and apices of tibiae pale yellow. Length about 1.3 mm. (distended, 1.7 mm.). Head, total length 0.164, width across eyes 0.116, just behind eyes 0.114, across cheeks 0.122, near base 0.108; eyes, dorsal length 0.050, width 0.032, interval 0.053; postocular setae pointed, 33 μ long, 95 apart, and 16 from eyes; prothorax smooth, 100 μ long, 193 across coxae, epimera not fused with notum, antero-marginal setae minute, epimerals 46 μ and very slightly dilated, other major setae pointed, antero-angulars 20, midlaterals 10, postero-marginals 37, coxals 23; mesothorax 183 across anterior angles, abdomen 255 across segment IV; tube, length 83, subbasal width 53, apical width 29, terminal setae 172; setae on abdominal segment IX pointed, 167, II 93, III 106. Antennal segments: I 24 (30), II 41 (24), III 34 (22), IV 39 (24), V 43 (23), VI 44 (21), VII 39 (19), VIII 32 (11); III normally without sense-cones, IV with one on either surface.

♂ (apterous).—Essentially like female.

ARIZONA: Chiricahua Mts., June 14-August 4, 1955, J.D.H., 9 ♀♀ (including holotype taken July 15) and 4 ♂♂ (including allotype taken July 24), from dead vegetation.

***Karnyothrips prolatus*, sp. nov.**

Readily known by the long head (fully 1.5 times as long as wide), nearly uniform dark coloration of body and antennae, conical eighth antennal segment (not narrowed at base and less than twice as long as wide), pointed major setae on ninth abdominal segment, and, in the male, by the small and nearly circular glandular area on the eighth abdominal sternum.

♀ (apterous).—Body, legs, and antennae nearly uniform blackish brown, with tarsi and apices of tibiae pale yellow and second antennal segment paler in median apical portion. Length about 1.2 mm. (distended, about 1.6 mm.). Head, total length 0.165, width across eyes 0.103, just behind eyes 0.100, across cheeks 0.107, near base 0.093; eyes, dorsal length 0.044, width 0.025, interval 0.053; postocular setae pointed, 22 μ long, 71 apart, and 19 from eyes; prothorax smooth, 110 μ long, 207 across coxae, epimera not fused with notum, antero-marginal setae minute, epimerals 35 μ and slightly dilated, other major setae 20-23 μ and pointed; mesothorax 178 μ across anterior angles, abdomen 267 at segment IV; tube, length 83, subbasal width 57, apical width 30, terminal setae 140; setae on abdominal segment IX pointed, I 93 μ , II 123, III 105. Antennal segments: I 27 (29), II 46 (26), III 30 (22), IV 40 (26), V 43 (23), VI 39 (23), VII 35 (19), VIII 23 (14); III without sense-cones, IV with one on either surface.

♂ (apterous).—Essentially like female.

ARIZONA: Chiricahua Mts. July 2-23, 1955, J.D.H., 5 ♀♀ (including holotype taken July 16) and 1 ♂ (allotype, July 16), from dead vegetation.

Hoplandrothrips nasutus, sp. nov.

Readily known from all other North American species by the long head and extremely long mouth-cone, the head 1.5 times as long as greatest width, the mouth-cone 1.1 times the length of head; antennae nearly black, with only the pedicel of III, and a small spot on its outer surface, yellow.

♀ (macropterous).—Length about 2.4 mm. (distended, 3.0 mm.). Body dark blackish brown, with crimson internal pigmentation; legs about concolorous with body, with all tarsi, both ends of all tibiae, and base of fore femora, paler and more yellowish; fore wings light brown, darker in anal lobe, with a pale streak paralleling posterior margin in middle half. Head 307 μ long, 192 across eyes, 203 across cheeks, 174 in front of the slight basal collar, surface with heavy anastomosing dark lines of sculpture except narrowly along median line, cheeks with minute spiniferous tubercles; postocular setae brown, knobbed, 80 long, 160 apart, and 25 from eyes. Eyes about 110 long, 67 wide, and 58 apart, not protruding. Mouth-cone 336, extending nearly to metasternum. Antennae typical, III fully twice as long as wide, inner surface sigmoid in the usual manner, VIII narrowed in about basal fourth and slightly widened at extreme base, sense-cones large, III 1 (2), IV 2 (2); lengths (and widths) of segments: I 51 (44), II 69 (37), III 100 (47), IV 96 (46), V 80 (37), VI 67 (30), VII 65 (27), VIII 41 (13). Prothorax 374 across coxae, pronotum 178 long medially, the latter smooth except for a few striae along posterior margin; major setae brown, knobbed, antero-marginals 28, antero-angulars 52, midlaterals 30, epimerals 81, postero-marginals 79, coxals 45, the coxae with about 5 additional short, stout, brown, pointed setae; mesothorax 399 across anterior angles, 409 wide posteriorly; fore tarsi with a stout curved tooth; fore wings with the usual pocket at middle, with 15-16 accessory setae on posterior margin, 1.12 mm. long. Abdomen 491 wide at segment IV; tube 196 long, 81 wide near base, 46 at apex, terminal setae 294; seta I on IX 192, II 215, III 176, all three pointed.

ARIZONA: Chiricahua Mts., June 19, 1955, J.D.H., 1 ♀ (holotype), from oak.

Acanthothrips⁶ perileucus, sp. nov.

Very closely allied to *albivittatus*, the antennae being nearly uniform dark blackish brown and the white markings consisting in part of a prominent dorso-lateral vitta on each side, extending from eye to base of pronotum; but differing in that the prothoracic white vittae are narrowed posteriorly and do not involve the inner sides of the epimera and thus do not enroach upon the pronotum at those points, their inner margins diverging, metathorax without white markings, mesonotum with a transverse white dash paralleling posterior margin, abdomen with the white restricted to a pair of small rounded spots at sides of segments II-VII, dorsum of prothorax, pterothorax, and median tergite of segment I of abdomen reticulate with fine dark lines, on which and between which are disposed stipple-like granules.

♀ (macropterous).—Length about 3.0 mm. (fully distended, about

⁶*Acanthothrips nodicornis* (Reuter), 1880; synonym: *Acanthothrips doaneii* Moulton, Bull 12, Tech. Ser., Bur. Ent., U. S. Dept. Agr., Pt. III: 64; 1907. New synonymy.

3.6 mm.). Head, total length 0.392, width across eyes 0.244, across cheeks 0.267 near base 0.217, across basal collar 0.023; eyes, dorsal length about 0.154, distance from posterior margin of head about 0.200 (in paratype treated with KOH: head, total length 0.354; eyes, dorsal length 0.143, width 0.088, interval 0.063, distance from base of head 0.189; mouth-cone, length 0.333); postocular setae, length about 0.053, interval 0.093, distance from eyes 0.029; prothorax, median length of pronotum 0.253, width (inclusive of coxae) 0.475; mesothorax, across anterior angles 0.484; abdomen, greatest width (at segment II) 0.518; tube, length 0.266, width across basal collar 0.102, least apical width 0.059; terminal setae 0.581. Antennal segments (μ): I 65 (52), II 80 (42), III 113 (51), IV 115 (51), V 115 (44), VI 80 (30), VII 67 (28), VIII 39 (16).

♂ (macropterous).—Not essentially different from female in color and structure; sternum VIII with narrow, transverse, glandular area at posterior third.

ARIZONA: Chiricahua Mts., June 18, 1955, J.D.H., 4 ♀♀ and 1 ♂ (this last the allotype), and June 19, 1955, J.D.H., 1 ♀ (holotype) and 1 ♂, all from oak.

Neurothrips apache, sp. nov.

Allied to *magnafemoralis* through lack of dorsal furrow and lack of wing-retaining setae on abdominal tergum VIII, absence of accessory setae on posterior margin of fore wings, bicolored tube, and toothed fore femora; but differing in having the cheeks nearly straight and parallel in anterior two-thirds (instead of strongly arched), dorsal length of eyes decidedly less than their distance from posterior margin of head (instead of about equal to that distance), general color paler, with antennal segments I and II golden yellow (instead of blackish brown), and the tube dark blackish brown in about apical seventh (instead of in apical half or more).

♀ (macropterous).—Length about 2.3 mm. (fully distended, about 2.6 mm.). Color (by reflected light) very pale, by naked eye with only head, pterothorax, and median portion of abdomen dark; head, anterior part of pronotum, all of abdominal segment IX, and posterior half of VIII, orange or brownish yellow; remainder of pronotum and of abdominal segment VIII, lateral thirds of abdominal segments I-V, and most of tube, chalky white, the basal third of tube yellow and without white internal pigment, its apical seventh nearly black; abdominal segments II-VII each with a small dark lateral spot, I-VII dark gray medially, these latter dark areas darkest at their sides and, on VI and VII, consisting usually of two separated diverging dashes; antennae largely dusky yellow, or golden yellow, IV shaded with brown and V with blackish brown in swollen portion, VI not shaded, VII and VIII dark blackish brown except for yellow pedicel of VII; legs white, with nearly black tarsal cups and with all tibiae and the middle and hind femora with a black mark or ring around middle; pterothorax variegated with light and dark markings, of which the most conspicuous is a large metanotal light area in the form of a deeply incised arrow-head or (perhaps better) an olla. Head, total length 0.293, width across eyes 0.203, across cheeks (exclusive of tubercles) 0.238, near base 0.210; eyes, dorsal length 0.112, width 0.060, interval 0.075 distance from posterior margin of head 0.143; postocular setae 0.023, interval 0.066,

distance from eyes 0.017; mouth-cone, length beyond posterior dorsal margin of head 0.154; prothorax, median length of pronotum 0.168, width (inclusive of coxae) 0.398, antero-marginal setae 0.017, antero-angular 0.030, midlateral 0.021, epimeral 0.033, postero-marginal 0.024, coxal 0.030; mesothorax, width across anterior angles 0.399; abdomen, width at segments II and III 0.423; tube, length 0.245, subbasal width 0.067, apical width 0.062, terminal setae 0.756. Antennal segments (μ): I 53 (36), II 65 (36), III 87 (36), IV 83 (35), V 78 (34), VI 58 (27), VII 56 (25), VIII 26 (16).

♂ (macropterous).—Not essentially different from female in color and structure; sternum VIII with a pair of longitudinally elliptical, glandular areas at lateral thirds.

NEW MEXICO: Peloncillo Mts., June 25-September 1, 1955 (holotype and allotype taken July 5), 56 ♀♀ and 24 ♂♂, J.D.H., Robert J. Miller, and William C. Miller, Jr.; Rodeo, July 28, 1955, J.D.H., 3 ♀♀.

ARIZONA: Chiricahua Mts., near Portal, July 11, 1955, J.D.H., 2 ♀♀ and 2 ♂♂; ca. 8 mi. S.W. of Rodeo, N.M., August 9, 1955, J.D.H., 1 ♀.

This species lives exposed on the bark of desert shrubs. From sun-burned head to dark-tipped tube, it is an intricate symphony of the soft colors of the arid desert in which it lives, and is certainly one of the most beautiful thrips known. No other specific name would seem wholly appropriate to a species which inhabits the last stronghold of the Apaches and which bears on its back a typical Indian water-jug.

Glyptothrips arkansanus, sp. nov.

Differing most conspicuously from the type species (*flavescens*) in having the pronotum, metanotum, and median tergite of first abdominal segment reticulate instead of minutely tuberculate, the antennae with a more or less evident suture separating the morphological seventh and eighth segments, and the antero-angular pronotal setae much farther apart than figured for *flavescens*.

♀ (macropterous).—Length about 1.6 mm (fully distended, 1.9 mm). Color brown, with head and prothorax usually paler and somewhat yellowish; abdomen with two longitudinal pale lines dividing terga II-VIII approximately into thirds, the median third of the terga II-VII pale posteriorly, tube yellowish apically and tipped with gray; legs dull yellow; fore wings pale yellowish brown in basal half, dusky in apical half, with a slight dark median line in middle third; antennae nearly uniform grayish yellow but darkened in apical half of terminal segment. Head formed as in type species, about 193 long, 149 across eyes, 138 just behind eyes, 165 across cheeks, 155 at base, 91 across head-process; surface reticulate in the usual manner; postocular setae 40, interval 142, distance from eyes 29, their tips dull; eyes 50, width 35, interval 80; mouth-cone normal, extending about 60 beyond posterior dorsal margin of head. Antennae normal in form of segments, but with an obsolete partial suture marking the union of the morphological seventh and eighth segments; I 47 (42), II 54 (36), III 64 (41), IV 52 (43), V 51 (36), VI 48 (30), VII + VIII 72 (25); sense-cones and setae normal. Prothorax 120, across coxae 284, its anterior margin with a slight median lobe, its surface largely reticulate but without tubercles; antero-marginal setae wanting, antero-angulans 31, arising in the angles themselves and

thus much farther apart than in *flavescens*, epimerals 57 and dull at tip, coxals minute, midlaterals and posteromarginals 30-33; mesothorax 301 across anterior angles; metanotum reticulate, the lines pale and distinct, the reticles not elevated at their middle into a low tubercle; fore wings 714, without accessory setae on posterior margin, distal subbasal seta much longer than the others and about as long as epimerals. Abdomen 346 at segment III; median tergite of I with anterior portion subretangular and reticulate, without low tubercles; posterior pair of wing-retaining setae on terga III-VII sigmoid; tube 197, across basal collar 83, at tip 33, sides straight and evenly tapering to tip from about basal sixth, terminal setae 78; most setae rounded at tip (not dilated), I on IX 83 and dull, II more tapering and nearly pointed.

♂ (brachypterous).—Smaller than female, but like it in all essentials; glandular area on sternum VIII in the form of a narrow transverse band just behind middle.

ARKANSAS: Stillwater, March 16, 1957, Dr. Willard H. Whitecomb, 29 ♀ ♀ (including holotype) and 2 ♂ ♂ (including allotype) from *Andropogon virginicus*.